example, the second lens group may move between the first lens group and the imaging plane in order to focus the lenses.

[0084] The filter may filter a partial wavelength from light incident through the first to seventh lenses, for example, the filter may filter infrared wavelengths of the incident light.

[0085] The thickness of the filter may be reduced during manufacturing by being formed of plastic.

[0086] The image sensor may be configured to have a high resolution, for example, a unit size of pixels configuring the image sensor may be 1.12 μm or less.

[0087] The stop may be positioned to adjust the amount of light incident on the lenses, for example, the stop may be disposed between the second and third lenses.

[0088] The optical imaging system may satisfy the following Conditional Expressions:

$-80<\{(1/f)*(Y/\tan\theta)-1\}*100<-20$ [Conditional Expression]

$TL/2Y<1.3$ [Conditional Expression]

$1.0<\tan\theta<4.0$ [Conditional Expression]

$0.4<R2/f<1.5$ [Conditional Expression]

$-1.5<f/f1<-0.05$ [Conditional Expression]

$0.3<f/f2<0.8$ [Conditional Expression]

$1.5<f/EPD<3.2$ [Conditional Expression]

$0.4<f/fG2<1.1.$ [Conditional Expression]

[0089] Here, f is an overall focal length of the optical imaging system, 2Y is a diagonal length of the imaging plane, Y is ½ of 2Y, θ is half of a field of view of the optical imaging system, R2 is a radius of curvature of the image-side surface of the first lens, f1 is a focal length of the first lens, f2 is a focal length of the second lens, EPD is an entrance pupil diameter, and fG2 is a synthetic focal length of the second lens group.

[0090] The optical imaging system satisfying the above Conditional Expressions may be miniaturized, and may realize high resolution.

[0091] Next, optical imaging systems according to several embodiments will be described.

[0092] First, an optical imaging system according to an embodiment will be described with reference to FIG. **1**.

[0093] The optical imaging system **100** includes an optical system including a first lens **110**, a second lens **120**, a third lens **130**, a fourth lens **140**, a fifth lens **150**, a sixth lens **160**, and a seventh lens **170**.

[0094] In the configurations of the lenses as described above, the first lens **110** and the second lens **120** form a first lens group G**1**, and the third to seventh lenses **130** to **170** form a second lens group G**2**.

[0095] The optical imaging system **100** includes a filter **180**, an image sensor **190**, and a stop ST. The filter **180** is disposed adjacently to an image-side surface of the seventh lens **170**, and the stop ST is disposed between the second lens **120** and the third lens **130**.

[0096] In the present embodiment, the first lens **110** has a negative refractive power. An object-side and image-side surfaces of the first lens **110** are concave. The second lens **120** has a positive refractive power, and both surfaces are convex. The third lens **130** has a negative refractive power. An object-side surface of third lens **130** is concave and the image-side surface is convex. The fourth lens **140** has a positive refractive power. An object-side surface of the fourth lens **140** is concave and an image-side surface is convex. The fifth lens **150** has a positive refractive power and both surfaces the fifth lens **150** are convex. The sixth lens **160** has a negative refractive power. An object-side surface of the sixth lens **160** is convex and an image-side surface is concave. In addition, inflection points are formed on both surfaces of the sixth lens **160**. The seventh lens **170** has a positive refractive power. The object-side surface of the seventh lens **170** is convex and the image-side surface is concave. In addition, inflection points are formed on both surfaces of the seventh lens **170**.

[0097] The optical imaging system configured as described above has aberration characteristics as illustrated in FIG. **2**. FIGS. **3** and **4** are tables representing characteristics of lenses and aspherical characteristics of the optical imaging system illustrated in FIG. **1**.

[0098] An optical imaging system according to another embodiment will be described with reference to FIG. **5**.

[0099] The optical imaging system **200** according to the embodiment includes an optical system having a first lens **210**, a second lens **220**, a third lens **230**, a fourth lens **240**, a fifth lens **250**, a sixth lens **260**, and a seventh lens **270**.

[0100] The first lens **210** and the second lens **220** form a first lens group G**1**, and the third to seventh lenses **230** to **270** may form a second lens group G**2**.

[0101] The optical imaging system **200** includes a filter **280**, an image sensor **290**, and a stop ST. The filter **280** is disposed adjacently to an image-side surface of the seventh lens **270**, and the stop ST is disposed between the second lens **220** and the third lens **230**.

[0102] The first lens **210** has a negative refractive power, and an object-side surface thereof is convex and an image-side surface thereof is concave. The second lens **220** has a positive refractive power, and both surfaces are convex. The third lens **230** has a negative refractive power, and an object-side surface is concave and an image-side surface is convex. The fourth lens **240** has a positive refractive power, and an object-side surface thereof is concave and an image-side surface thereof is convex. The fifth lens **250** has a positive refractive power, and both surfaces thereof are convex. The sixth lens **260** has a negative refractive power, and an object-side surface thereof is convex and an image-side surface thereof is concave. In addition, inflection points are formed on both surfaces of the sixth lens **260**. The seventh lens **270** has a positive refractive power, and an object-side surface thereof is convex and an image-side surface thereof is concave. In addition, inflection points are formed on both surfaces of the seventh lens **270**.

[0103] The optical imaging system configured as described above represents aberration characteristics as illustrated in FIG. **6**. FIGS. **7** and **8** are tables representing characteristics of lenses and aspherical characteristics of the optical imaging system according to the embodiment illustrated in FIG. **6**.

[0104] An optical imaging system according to another embodiment will be described with reference to FIG. **9**.

[0105] The optical imaging system **300** according to the embodiment includes an optical system including a first lens **310**, a second lens **320**, a third lens **330**, a fourth lens **340**, a fifth lens **350**, a sixth lens **360**, and a seventh lens **370**.